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SITE CONDITIONS

1 SAFETY

The special safety requirements listed herein shall not relieve Contractor from complying with the Occupational Safety and Health Act (OSHA) or any other contractual agreement, and are only noted to highlight potential problem areas.

1.1 Safety Requirements

Contractor shall comply with the safety program in effect at the work site. This program includes use of OSHA regulations, and other contract documents. Where these documents address the same subject, the more stringent requirement shall apply.

1.2 Safety Program

Before starting work, Contractor shall submit a written safety program that all Contractors' employees must follow while on the Campus. Minimum acceptable program shall meet OSHA requirements.

1.3 Deleted

1.4 Safety Orientation

1.4.1 Contractor shall conduct a safety orientation, covering these Site Conditions, and other safety procedures covered at the pre-construction meeting for each Contractor employee before he/she begins work on site.

1.4.2 The cost for Contractor's employees to attend this orientation shall be included in Contractor's price.

1.4.3 DSU will furnish a "site specific" safety orientation prior to Contractor being allowed to work on site. The contents of these orientations will be site-specific hazards, unique area operating conditions or requirements, and DSU safety standards. Prime contractors shall ensure their tier subcontractors are made aware of these requires and work accordingly. The contractor is not relieved of responsibility for providing safety training to employees or subcontractors performing work that may be required by OSHA for work defined in the contract documents.

1.4.4 All contract employees performing work on or for Delaware State University managed projects must have basic knowledge of job site safety requirements.

1.5 Safety Training

Contractor's job supervisor shall ensure that safety training is carried out before personnel start work and continues throughout all phases of the work.

1.6 Protective Clothing

1.6.1 Contractor's personnel shall wear hard hats, industrial quality shoes, and safety glasses with side shields (as required by equipment/materials manufactures recommendations).

1.6.2 Personal clothing will be in good repair (no holes), shirts shall cover the shoulders and clothing will contain no offensive language, cartoons, etc....

- 1.6.3 Face shields and welding visors shall be of types that attach to the hard hat when hard hats are required.
- 1.6.4 Gloves suitable for the job being performed shall be worn unless the job cannot be done with gloves or unless wearing gloves increases the hazard.
- 1.6.5 These items shall be furnished at no cost to DSU.

1.7 Respiratory Equipment

Before any employee starts work requiring use of respiratory protective equipment, Contractor shall furnish DSU with proof of compliance with OSHA Sections 1926.103 and 1910.134, including the following documentation:

- 1.7.1 Physician's approval for the employee to use respiratory protective equipment. A fit test record for type of respirator the employee is to use.
- 1.7.2 Contractor shall furnish emergency rescue respirators and equipment required for work inside a vessel or confined space (closed chamber).

1.8 Barricades

Contractor shall furnish, erect, maintain, and dismantle all barricades w/signage required for its work areas. Barricade tape shall be yellow w/black center unless otherwise indicated.

- 1.8.1 Barricades are required:
 - Around all work areas.
 - Around crane swing area.
 - To define outer limits of high noise areas. Post appropriate signs.
 - To define areas of overhead work.
 - Around excavations. Provide wood or plastic snow fencing.
 - For road closures. Barricades may be sawhorse type. Post appropriate signs. Provide flashing yellow lights if barricades are left overnight. Notify DSU Construction, 48 hours before closing off any road.
- 1.8.2 Warning (tape and stand) barricades - Tape shall be supported only by stands or posts acceptable to DSU; do not tie to columns, pipes, valves, material drums, vegetation, etc. Stands or posts subjected to wind shall be weighted or otherwise secured so they remain erect.
- 1.8.3 Protective (rigid) barricades - Shall consist of guardrail and midrail meeting OSHA definition of "standard railing" {OSHA Section 1926.500(f)}, capable of supporting a 200 pound force in any direction with minimal deflection of 3" in any direction.
- 1.8.4 Barricades around work areas shall be identified with signs giving the name and telephone number of a person to contact in emergencies.

1.9 Construction Equipment

- 1.9.1 Contractor and all tier subcontractors shall comply with provisions of the job site.
- 1.9.2 Major equipment is defined as cranes, aerial work platforms, boom trucks, and bucket trucks.
- 1.9.3 Contractor shall notify DSU Construction prior to use of any lifting equipment, inspection of equipment must be accomplished. Costs resulting from delays for failure to provide proper notice shall be to Contractor's account.
 - 1.9.3.1 Cranes, forklifts, trucks, and similar construction equipment shall not be left unattended unless shutdown and secured to prevent unintentional movement.
 - 1.9.3.2 All vehicles, except those primarily configured for passengers (e.g., cars, station wagons, vans, and light duty pick-up trucks) must have the engine turned off, the parking brake set, the transmission in gear or "park" when parked and unattended. "Unattended" means with no one in the cab or in a position to have complete control over vehicular motion, and is intended to apply primarily to delivery vehicles and concrete trucks. A running engine will be permitted where necessary for an auxiliary power source, provided the other requirements noted above are met.
 - 1.9.3.3 Semi-trailers to be loaded or unloaded with the tractor disconnected shall have a wheel chocked in opposite directions.
 - 1.9.3.4 Contractor shall furnish chocks for subcontractors, suppliers, and material deliveries arriving at the site without their own chocks.
- 1.9.4 Truck-mounted, hydraulic, telescoping boom cranes shall not be moved until the boom is fully retracted and lowered into the boom cradle, if provided, and the hook is secured in a tie-down lug at some point on the truck bed.
- 1.9.5 Modifications shall not be made to lifting equipment without the manufacturer's written permission. Each custom designed, job made lifting accessory (e.g., grabs, hooks, clamps, etc.) shall be marked to indicate the safe working load. {Reference OSHA Section 1926.251(a)(4)}.
- 1.9.6 Rigging from the buckets or booms of backhoes, front-end loaders, bulldozers, etc., to lay pipe, erect steel, pick and carry, etc., will not be permitted unless a properly installed and tested lifting eye or lug has been attached to the bucket or boom by the manufacturer, and lifting capacities and configurations are specified in the manufacturer's operating manual.
- 1.9.7 All earth moving and hauling equipment, and any vehicle or construction equipment shall be equipped with audible backup alarms.
- 1.9.8 Deleted

- 1.9.9 Contractor shall submit details of its proposed work platform and rigging method for DSU Construction's review before conducting any work from a platform suspended from a crane. Anti-two-block devices are required when using a hydraulic crane.
- 1.9.10 Access to, and egress from, crane cabs, material wagons, truck beds, crawler backhoes, etc., shall be achieved by built-in ladder and/or hand holds provided by the equipment manufacturer. If such means are not provided, Contractor shall provide a properly positioned and secured ladder or other approved method.
- 1.9.11 Contractor shall comply with the manufacture's and OSHA's requirements for aerial work platforms, man lifts, or bucket trucks:
 - Operator shall be trained at Contractor's expense.
- 1.9.12 No one shall be permitted to operate a lifting device (material or personnel) unless they have been properly trained.
- 1.9.13 The manufacturer's operating instructions shall accompany the device.
- 1.9.14 Crane inspection records must be readily available and kept within the crane.
- 1.9.15 No later than 5 calendar days before the lift is scheduled to be made, Contractor shall submit, for DSU Construction's review, a rigging preplan for each lift.
- 1.9.16 The rigging pre-plan shall include:
 - Manufacturer, model, and capacity of the crane(s)
 - Capacity charts
 - Working radius
 - Boom length
 - Weight of load including rigging
 - How the weight was determined
 - Number of parts of line to be used
 - Size and capacity of rigging hardware (slings, shackles, etc.)
- 1.9.17 Lifts over occupied buildings shall be made with the approval of DSU's construction representative. The area within the boom swing radius shall be evacuated and barricaded.
- 1.9.18 Noisy equipment, such as pavement breakers, high speed saws, etc., required in performance of the work, shall be checked and cleared 24 hours prior to use with DSU's construction representative.

1.10 Access

Access to exit doors, electric or elevator panels, and fire extinguishers or other emergency equipment must not be blocked at any time.

1.11 Spray Painting

During spray painting operations where a hazardous warning is posted on the paint can label and controls are inadequate to prevent harmful exposure to employees, Contractor shall comply with OSHA Sections 1926.103 and 1910.134, at no additional cost to DSU.

1.12 Ladders

1.12.1 Contractor's qualified person shall inspect all ladders brought onto the job site. Ladders shall be visually inspected by the user before each use. Defective ladders shall be promptly removed from the site. Ladders without required labels shall not be used.

1.12.2 Folding (Trestle Type) and metal ladders are not permitted.

1.13 Scaffolds

Scaffolds shall comply with the requirements of OSHA. Competent person to provide tag-indicating status of scaffold (complete or incomplete).

1.14 Fall Protection

1.14.1 Protection is required to prevent personnel or material from falling through floor openings, wall openings, roof edges, stairways, elevator shafts, etc.

1.14.2 Before starting any elevated work, Contractor shall submit a fall prevention plan for DSU's review. As a minimum, the plan must include:

- A list of all anticipated tasks to be performed at elevated locations.
- The proposed method of fall protection for each task:
 - Elimination of fall hazards (through engineered means)
 - Prevention of falls (by changing work procedure/work environment)
 - Control of falls (through use of fall arrest equipment)
- Name(s) and qualifications of Contractor's competent person(s) relative to fall protection.
- Rescue Plan

1.14.3 Contractor shall provide a workable fall protection system (horizontal lifelines, retractable lifelines, nets, etc.) for all employees engaged in placing or installing grating and Q-decking.

1.14.4 To the extent practical, personnel erecting, connecting or bolting up structural steel shall walk along the steel by straddling the member and walking on the bottom flange.

1.14.5 OSHA's fall protection standard requires fall protection to be implemented beginning at 6' above a lower level unless otherwise noted within OSHA.

- Steel Erections – 15'-30'
- Scaffolds – 10'

1.15 Ground Fault Protection

Contractor shall provide ground fault circuit interrupter protection for all cord sets, receptacles, and electrical tools and equipment connected by cord and plug which are used or available for use by employees.

1.16 Gas Cylinders

1.16.1 Compressed gas cylinders shall be properly secured on two-wheel hand trucks designed for this use. Compressed gas cylinders shall not be brought into buildings. Unless individual cylinders are equipped with regulating devices, they shall have the safety cap secured in place. All cylinders shall be maintained in the upright position and secured with a noncombustible material.

1.16.2 All burning rigs shall be broken down with regulators removed and protective caps screwed down hand tight at the end of work day.

1.17 Tool Inspection

All Contractor-furnished portable tools and equipment shall be maintained in safe working order and are subject to inspection at any time while on Campus. DSU retains the right to prohibit, or restrict, the use of tools and equipment determined to be in unsafe working condition.

1.18 Projecting Materials

Reinforcing steel or similar material projecting above horizontal surfaces shall be capped or otherwise protected to prevent the possibility of impaling personnel.

1.19 Personnel on Ductwork/Pipe/Conduit Racks

Contractor shall provide means of access and egress adjacent to the work area for personnel working above ductwork or in pipe/conduit racks. Walking on, crawling along, sitting on, or working from ductwork/racks will not be permitted.

1.20 Lockout Procedure

1.20.1 Contractor shall verify removal of and securing energy before starting work on any potential energy containing or electrical systems.

1.20.2 All installation and renovation work on power distribution systems operating at 480 volts or higher require both phase to phase and phase to ground megger testing to be performed. A qualified DSU representative may witness these megger tests. There shall be written documentation indicating the results of these tests.

1.20.3 All installation or renovation work performed on power distribution system operating at 480 volts or higher will require a complete written and DSU reviewed job plan. If any part of the job plan cannot be performed as written or if anything changes from the original job plan, work shall stop until a new job plan can be written and reviewed.

1.20.4 All electrical work shall be completed in accordance with NFPA-70E. These requirements also apply to all tier Contractors.

1.21 Safety Violations

1.21.1 Employees who violate safety requirements will be denied access to the Campus.

1.21.2 In the event of OSHA violations or unsafe practices involving imminent danger immediate action shall be taken to stop work and correct the hazardous situation. If violations continue or corrective actions are not taken after a reasonable period of time, DSU's option of terminating the contract in accordance with the General Conditions will be considered.

1.22 Reporting Injuries

1.22.1 Contractor shall immediately notify DSU of any injury or potentially serious hazard to personnel on the site. Each injury or incident shall be jointly investigated by Contractor's site supervisor and DSU's construction representative. Contractor shall submit a detailed report to DSU with 24 hours of the injury or incident.

1.22.2 Contractor's supervisor or foreman shall be available to provide information for development of a report.

1.22.3 Any contractor personnel that receive off-site medical treatment, upon returning to work, will report to DSU Construction Director before resuming work on the job-site.

1.23 Hazard Communication

1.23.1 Contractor and all tier subcontractors shall comply with OSHA Hazard Communication Standard 1910.1200 and all applicable state and local hazard communication requirements.

- A copy of all MSDS (Material Safety Data Sheets) shall be available to DSU prior to start of work.

1.23.2 Contractor shall obtain DSU's approval before introducing any hazardous materials onto DSU's property. Such materials shall be properly labeled and strictly controlled. Storage and use must comply with the Material Safety Data Sheets.

2 FIRE PROTECTION

2.1 Procedures

Contractor shall observe job site fire, fume release, and disaster procedures. Contractor's job supervisor will be given a copy of and be oriented by DSU on the alarm and evacuation procedures and shall ensure that all Contractor's employees are thoroughly familiar with those procedures.

2.2 Smoking

2.2.1 Smoking will be permitted only in areas designated by DSU. Contractor shall furnish butt cans and fire extinguishers in such areas.

2.2.2 Smoking by a contractor employee in any non-designated area shall be considered cause to require Contractor to remove that employee from DSU's property.

2.3 Flammable Materials

Storage and use of flammable materials will be subject to DSU's agreement. OSHA-approved safety cabinets and cans shall be used for storing and dispensing flammable liquids and must have prior DSU's review. Gasoline powered tools or equipment are not permitted inside buildings.

2.4 Fire Extinguishers

Contractor shall furnish a minimum 10-pound fire extinguisher. The extinguishers shall be rated not less than 2A:40-BC and be maintained for the duration of the work. Discharged extinguishers shall be recharged or replaced as necessary.

2.5 Oil Rag Storage

2.5.1 Dirty and oily rags shall be kept in fireproof metal containers with self-closing lids and removed from premises daily.

2.5.2 Oil catch pans placed under pipe and conduit threading machines must be non-combustible: i.e., metal and filled with nonflammable absorbent material.

2.6 Protective Structures

Any plastic, tarpaulin, or other material used to construct a hut, tent, or similar protective structure, shall be flame retardant.

2.7 Burning and Welding Equipment

Flashback arrestors shall be an integral part of the oxy/fuel rig. FR11 or equivalent arrestors shall be installed at the torch inlet valves, and/or FR43 or equivalent arrestors at the regulators.

2.8 Powered Equipment

No gasoline or propane equipment is permitted in Buildings. All equipment to be air or electric operated.

3 CONSTRUCTION FACILITIES

3.1 Identification

Contractor shall post a sign, of a size and character consistent with the size, nature and duration of the contract, identifying its site headquarters, which may be an office, trailer, toolbox, or storage area.

3.2 Parking

3.2.1 Contractor's employees shall park in construction parking as designated by DSU. The contractor will be responsible to provide any special/alternative transportation, as appropriate, to ensure his employees site access. Contractor May be required to register for a parking pass for Parking Lot they are to use.

3.2.2 DSU must designate all storage or lay down areas in advance.

3.3 Site Access

Designated routes will be established for access to the work area and for movement of material and equipment. Movement of material and equipment shall be scheduled with DSU.

3.4 Deleted

3.5 Telephone

Contractor shall arrange telephone service, as needed, through the local telephone or otherwise arranged with DSU representative.

3.6 Drinking Water and Sanitary Facilities

Contractor shall provide drinking water and sanitary facilities to satisfy its employees' needs in compliance with OSHA requirements or as otherwise arranged with DSU representative.

3.7 Water

3.7.1 Water for construction is available within 1000 feet.

3.7.2 DSU will furnish water for construction and testing purposes at one 1 inch outlet within/approximately 500 feet from the work area. Contractor shall make all connections and run any hoses and pipe extensions required.

3.7.3 Fire hydrants shall not be used as a source of water without DSU's prior written approval.

3.8 Electric Power

DSU will furnish 120 volt, 60 Hertz, 20 amp electrical power at one location approximately 1000 feet from the work area for TC power and small tools. Contractor shall make all connections (3-wire grounded) and run any extensions required. Contractor needs to provide an electric source in excess of 110 volts, 60 hertz, 20 amp. (i.e. welding machines, concrete saws, etc.)

3.9 Compressed Air

Compressed air is not available in the work area. Contractors shall provide their own source of compressed air.

3.10 Campus Facilities

Contractor's personnel will not be permitted to use Campus facilities such as lunchroom, change areas, or toilets unless previously arranged with DSU.

4 HOUSEKEEPING

4.1 Clean Up

4.1.1 Contractor shall keep Job site in an organized and clean condition.

4.1.2 Contractor shall take all necessary precautions to prevent dirt, dust, etc., from entering operating areas. Occupied areas during construction must be protected from all work that will produce dust. Erect (6) mil plastic walls with sealed top and bottom plates to contain dust in work area. Remove upon completion of the work. Plastic to be fire resistant.

4.1.3 During the course of construction, alteration, or repairs, all debris shall be kept cleared from work areas, passageways, and stairs in and around buildings or other structures.

- 4.1.4 Contractor shall clean up all work areas. Debris and scrap material will not be allowed to accumulate in any work area. As work progresses the area is to be kept clean at all times during the day - vacuum all dust as necessary. Contractor shall remove off site all scrap materials and waste on a daily basis.
- 4.1.5 Should Contractor fail to keep its work areas orderly, DSU will perform this work on a time-and-material basis and back-charge Contractor.
- 4.1.6 Concrete trucks and chutes shall be washed out into 55-gallon drums. Contractor shall provide drums. Disposal of drums in a suitable landfill shall be included in Contractor's price.

4.2 Waste Material Control

- 4.2.1 Waste equipment oil shall be disposed off site.
- 4.2.2 Contractor shall ensure that its operations comply with the oil spill prevention provisions of 40 CFR. 112. Further, the spillage of oil or any other foreign substance onto the ground or into sumps, trenches or ditches is strictly prohibited.
- 4.2.3 Contractor shall provide metal containers for the collection and separation of waste, trash, and other refuse. Containers used for garbage, acids, harmful dust, etc., shall be equipped with covers. Contractor shall not use Campus dumpsters.

4.3 Road Maintenance

Contractor shall maintain roads and other Campus areas affected by its operations in a clean and uncluttered condition at all times. Any dirt, mud, concrete, debris, spoil, refuse, etc., shall be cleaned up and removed immediately.

4.4 Spill Notification and Protection

- 4.4.1 Contractor shall maintain filter media around all storm drains prior to commencement of work in areas adjacent to drains.
Contractor shall contain spills immediately and notify the DSU site representative as soon as possible.

4.5 Roof Protection

- 4.5.1 Contractor is required to provide necessary measures to protect roofing from damage due to contractor's activities on rooftops. Also provide proper house-keeping to avoid reliance on protection to keep roof intact. Inspect and report condition on a weekly basis.

5 WORKING CONDITIONS

5.1 Visitor Control

All visitors shall be escorted by Contractor's supervision, and are to wear required PPE.

5.2 Coordination with Others

Where Contractor's work must be performed in conjunction with work by others, Contractor shall cooperate with DSU in scheduling, coordinating, and sequencing its work with that of others so all work may proceed with minimal interference or delay.

5.3 Co-Occupancy

Contractor shall provide all measures required to protect existing facilities and work performed by others from damage due to Contractor's (including its tier subcontractors) operations or negligence. DSU may suspend Contractor's operation until such protective measures are provided, and the cost for stand-by of Contractor's, its tier subcontractor's, or other contractor's men and equipment shall be Contractor's account.

5.4 Construction Planning

5.4.1 Work plans will be required on a project basis.

5.4.2 Close proximity plan will be required for use of construction equipment over, or within 15 feet of, any overhead electric power line, process pipe, or service pipe. Contractor shall develop this plan and submit for DSU's Review.

5.4.3 Vessel or confined space entry plan will be required for any work inside a vessel or confined space (i.e., any area which must be entered through a restricted opening, such as tanks, vessels, ductwork, vessel skirts, manholes, etc.). Contractor shall develop and submit job plan sufficiently in advance to allow all required reviews to be obtained before work is scheduled to start. Contractor shall furnish all protective and emergency equipment, and atmospheric testing equipment. Continuous monitoring equipment shall have audible alarms.

5.4.4 An excavation plan will be required for each area to be excavated. Contractor shall comply with all restrictions stated in the plan. Contractor shall hand excavate to locate all identified underground services before any mechanical excavating equipment will be permitted to be used.

5.4.5 Roof, Wall And Floor Penetrations require Authorization

5.4.5.1 Contractor is responsible for cutting and patching of any roof penetrations and the weather tightness of these penetration(s). Work to be performed by qualified personnel including coordination with manufacturer of roof so existing warranties are not disrupted.

5.5 Material Shipment and Storage

5.5.1 Only truck shipments to Campus are acceptable. Contractor shall coordinate shipments with DSU to avoid interfering with Campus operations. Access for truck shipments to the storage and work areas is through the contractor's gate, which has no overhead obstructions. Contractor shall unload and handle its material. DSU Receiving will not accept deliveries for the Contractor.

5.5.2 Limited ground space will be made available to Contractor by DSU approximately 500 feet from the work area.

5.5.3 Material being furnished by DSU will be made available to Contractor in an area approximately 500 feet from the work area.

5.6 Prohibited Items

Food, beverages, and chewing tobacco shall not be consumed in the work area.

5.7 Tool and Equipment Control

DSU will not be responsible for the loss or theft, either on the Campus, of Contractor's tools or equipment, or Contractor employees' personal belongings.

5.8 Excavation Requirements

5.8.1 Twenty-four (24) hours before Contractor personnel first enter any excavation, trench, hole, etc., over five (5) feet deep, Contractors competent person will inspect the side slopes, shoring, or sheeting for compliance with OSHA Section 1926.652. Contractor shall correct all noted discrepancies before allowing work to continue.

5.8.2 Contractor shall comply with OSHA 1926.652 "Competent Person" - This designated person shall be present at all times during the excavating process.

5.9 Non- Harassment Policy

Everyone is entitled to a work environment free from sexual, racial or other distasteful discrimination. Contractor shall insure that no one will be discriminated against in the workplace. Disrespect for any employee, sexual harassment, offensive or insulting behavior is considered unacceptable and may result in termination.